

Interview Summary

Application No.

10/042,128

Applicant(s)

ZHA ET AL.

Examiner

David L. Sorkin

Art Unit

1723

All participants (applicant, applicant's representative, PTO personnel):

(1) David L. Sorkin.

(3) James Herkenhoff.

(2) Drew Hamilton.

(4) _____.

Date of Interview: 17 March 2003.

Type: a) ☐ Telephonic b) ☐ Video Conference

c) ☒ Personal [copy given to: 1) ☐ applicant 2) ☒ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No.

If Yes, brief description: _____.

Claim(s) discussed: proposed claims (attached).

Identification of prior art discussed: US 5,209,852 and US 5,639,373.

Agreement with respect to the claims f) ☐ was reached. g) ☒ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Reviewed prosecution history of parent case. Discussed issues of gas pressurization and distribution of holes relative to fibers, with regard to the references cited above. The proposed claims include limitations which overcame art in the parent case. Examiner will further compare claims to parent case and US 6,156,200, upon official filing of the claims.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.



Examiner's signature, if required

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case unless both applicant and examiner agree that the examiner will record same. Where the examiner agrees to record the substance of the interview, or when it is adequately recorded on the Form or in an attachment to the Form, the examiner should check the appropriate box at the bottom of the Form which informs the applicant that the submission of a separate record of the substance of the interview as a supplement to the Form is not required.

It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Fax

To: David L. Sorkin/ Art Unit 1723

From: Drew Hamilton

Fax: 703-872-9310

Pages: 3+1

Phone: 703-308-1121

Date: 03/16/03

Re: Interview for S/N 10/042,128

CC:

☒ **Urgent** ☐ **For Review** ☐ **Please Comment** ☐ **Please Reply** ☐ **Please Recycle**

• **Comments:** Please forward the attached to Examiner Sorkin for an 11am interview on March 17th.
This fax is an informal communication, please do not enter into file.

Informal Communication-Not for Entry into File
Interview Agenda for Serial Number 10/042,128 (USFMCR.066C3)

During the interview scheduled for March 17, 2003 at 11am, Applicant would like to discuss the following:

1. The Sunaoka (U.S. Patent No. 5,209,852) and Mahendran (U.S. Patent No. 5,639,373) references.
2. Proposed claim amendments as set forth below (**additions bolded and underlined** and deletions ~~struck through~~):

Do Not Enter

1. (Amended) A method of removing fouling materials from the surface of a plurality of porous membranes arranged in a membrane module ~~by providing, from within the module, by means other than gas passing,~~ **the porous membranes forming an array, the module having a header in which one end of each of the membranes is mounted, the header connected to a source of pressurized gas, the method comprising providing, through a plurality of holes distributed throughout the header but not** through the pores of said membranes, gas bubbles in a uniform distribution relative to the porous membrane array such that said bubbles move past the surfaces of and vibrate said membranes to dislodge fouling materials therefrom, said membranes being arranged in close proximity to one another and mounted to prevent excessive movement therebetween, **wherein said plurality of holes is not solely peripheral to the distribution of said membranes in said header.**

9. (Amended) A membrane module comprising a plurality of porous membranes, said membranes, **said membranes** being arranged in close proximity to one another and mounted to prevent excessive movement therebetween, ~~and means for providing, from within the module, by means other than gas passing~~ **the membranes forming an array, the module having a header in which one end of each of the membranes is mounted, the header connected to a source of pressurized gas so as permit formation of gas bubbles such that, in use, said gas moves through a plurality of holes distributed throughout said header but not** through the pores of said membranes, ~~gas bubbles such that, in use,~~ **and** said bubbles move past the surfaces of and vibrate said membranes to dislodge fouling materials therefrom, **wherein said plurality of holes is not solely peripheral to the distribution of said membranes in said header.**

22. (Amended) A membrane module comprising a plurality of porous hollow membrane fibres extending longitudinally between and mounted at each end to a respective potting head, said membrane fibres being arranged in close proximity to one another and mounted to prevent excessive movement therebetween, one of said potting heads having a distributed array of aeration holes formed therein, said aeration holes and said fibres being substantially uniformly mounted in said one potting head relative to said aeration holes ~~and,~~ wherein said one potting head is connected to a source of pressurized gas and is configured so as to communicate said pressurized gas to said array of aeration holes, wherein said one potting head is not connected to a source of feed liquid to be filtered, and wherein said distributed array of said aeration holes is not solely peripheral to a distribution of said fibers in said potting head.

27. (Amended) A method of removing accumulated solids from the surface of a plurality of porous hollow fibre membranes mounted and extending longitudinally in an array to form a membrane module, said membranes being arranged in close proximity to one another and mounted to prevent excessive movement therebetween, the module having a header in which one end of each of the membranes is mounted, the header connected to a source of pressurized gas, the method comprising the steps of providing, ~~from within said array, by means other than gas passing~~ through a plurality of holes distributed throughout the header but not through the pores of said membranes, uniformly distributed gas bubbles, said distribution being such that said bubbles pass substantially uniformly between each membrane in said array to scour the surface of and vibrate said membranes and remove accumulated solids from within the membrane module, wherein said plurality of holes is not solely peripheral to the distribution of said membranes in said header.

34. (New) A method of removing fouling materials from the surface of a plurality of porous membranes arranged in a membrane module, the porous membranes comprising hollow fibre membranes, the porous membranes forming an array, wherein the fibre membranes are arranged in bundles surrounded by a perforated cage which serves to prevent said excessive movement therebetween, the module having a header in which one end of each of the membranes is mounted, the header connected to a source of pressurized gas, the method comprising providing, through a plurality of holes distributed throughout the header but not through the pores of said membranes, gas bubbles in a uniform distribution relative to the porous membrane array such that said bubbles move past the surfaces of and vibrate said membranes to dislodge fouling materials therefrom, said membranes being arranged in close proximity to one another and mounted to prevent excessive movement therebetween.

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